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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/016,801

11/30/2001

Bin Zhao

12569-07/NEC

6082

7590

10/24/2003

MYERS, DAWES AND ANDRAS  
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EXAMINER

VY, HUNG T

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/016,801

Applicant(s)

ZHAO, BIN

Examiner

Hung T Vy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.



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### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. In response to the amendment filed on 08/11/2003, claims 1-18 are pending in this application.

### Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-18 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 the phrase "the first and second light transmissive materials are disposed between the partially reflective and the totally surface such that **they** cooperate with one another **in manner** with mitigates changes in an optical path length of the reflective resonator due to changes in temperature " renders the claim indefinite because it is unclear how they cooperate with one another in manner which mitigates changes in an optical path length of the reflective resonator due to changes in temperature. The claim recites nothing to control the temperature. "They", "in manner" are not preferred in claim language. Who are they? How light transmissive material cooperates. The claim only recites the first and second light transmissive material, the claim does not recite any structure and material in order to produce temperature compensating reflective resonator.

Regarding claims 4-5,7, 17 and 18, the claims are rendered indefinite because the claims are not clear how temperature compensating reflective resonator with the claims recite only the solid light transmissive material, a reflector and a gap. The claims do not recite any structure to support the temperature compensating.

Regarding claim 6, the claim is rendered indefinite because it is not clear how light transmissive material cooperates. The claim recite the first and second the light transmissive materials, the claim does not recite the structure in order to produce frequency locker.

Regarding claim 14, the phrase "Ohara Corporation clearcream ultra low expansion glass" renders claim indefinite because it is unclear how applicant can claim the name "Ohara Corporation clearcream ultra low expansion glass". The name "Ohara Corporation clearcream ultra low expansion glass" is belonged to Ohara corporation.

Claims 2,3, and 8-16 depend from rejected claim 1,4,5,6, 7,17 and 18 thereby render these dependent claims indefinite.

### **Claim Rejections - 35 USC § 102**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application

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filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

35 U.S.C. § 102(e), as revised by the AIPA and H.R. 2215, applies to all qualifying references, except when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. For such patents, the prior art date is determined under 35 U.S.C. § 102(e) as it existed prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. § 102(e)).

Claims 1-18 are rejected under 35 U. S. C. § 102 (e) as being anticipated by Kmetec et al., U.S. patent No. 6,614,818.

Regarding claims 1-7, Conrad discloses a device comprising: a partially reflective surface (58); a first light transmissive material (54); a second light transmissive material (between (54) and (56)); a totally reflective surface (56); a spacer (52) attached to the partially reflective surface and the totally reflective surface to determine a distance there between (See fig. 5); and wherein the first (54) and second light transmissive materials are disposed between the partially reflective (58) surface and the totally reflective surface (56) such that they cooperate with one another in manner which mitigates changes in an optical path length of the reflective resonator due to changes in temperature (See column 4, line 46-61), it is inherent that the second light transmissive material comprises a material selected from the group of air; vacuum; and liquid (See fig. 5,6), a reflector (56), it is inherent the thermal coefficient of optical path length by given the formular :  $\alpha_{op} = dOP/(OpdT)$  because when the device has the optical path length OP then the device will have the same formula. Further, all solid state material have thermal coefficient.

With respect to claims 17-18, the methods for mitigating undesirable effects due to temperature are considered as product by process steps.

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Regarding claim 8-16, Kmetec et al. discloses the light transmitting material comprises glass (54) (gain medium is crystal on column 13, line 3); the reflector comprises a mirror (56) (See fig. 5).

### **Response to Arguments**

4. Applicant's arguments with respect to claims 1-18 have been considered and are persuasive. Therefore, the rejection has been withdrawn. However, the claims are moot in view of the new ground(s) of rejection.


5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Vy whose telephone number is (703) 605-0759. The examiner can normally be reached on Monday-Friday 8:30 am - 5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul IP can be reached on (703) 308-3098. The fax numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
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Hung T. Vy  
Art Unit 2828

October 9, 2003